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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/695,760 | WOODSON ET AL. | |
| | Examiner | Art Unit | |
| | Jason L. Lazorcik | 1791 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-27 and 29-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27 and 29-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-27, and 29- 39** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants description as originally filed provides no support for the instant limitation wherein the electrical smoking system "generates tobacco smoke without igniting the tobacco-containing mat".

**Claims 1-27, and 29-39** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In the instant case, Applicant claims that the electrical smoking system "generates tobacco smoke without igniting the tobacco-containing mat".

As noted in the prior Office Action, the term smoke is conventionally used to identify "the visible vapor and gases given off by a burning or smoldering substance, esp. the gray, brown, or blackish mixture of gases and suspended carbon particles

resulting from the combustion of wood, peat, coal, or other organic matter." (*Dictionary.com Unabridged (v 1.0.1)*. Random House, Inc. http://dictionary.reference.com/browse/smoke (accessed: December 14, 2006).). Restated, "smoke" therefore appears by its very definition to invoke the process of ignition and burning and is thus distinguished from other finely divided and suspended states of matter like fog and aerosols in its method of generation.

Similarly, the term igniting is conventionally understood to mean " to set on fire", "begin to burn" (*Dictionary.com Unabridged (v 1.0.1)*. Random House, Inc. http://dictionary.reference.com/browse/ignite (accessed: January 25, 2008).) It follows that the generation of tobacco smoke implies the ignition and subsequent burning of a tobacco containing material. It is the Examiners position that Applicant has failed to provide a sufficient showing to enable one of ordinary skill in the art to generate tobacco smoke from the electrically heated smoking system without ignition of the tobacco containing mat.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-27 and 29-39** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 33, and 34, applicant recites the limitation wherein the electrical smoking system "generates smoke without igniting the tobacco-containing mat". At the outset, it is noted that the instant limitation is directed to the electrical smoking system and not to the claimed cigarette itself. Additionally, the limitation is construed as a statement of intended use for the claimed cigarette and/or the electrical smoking system. In either case, the limitation is construed to provide substantially no additional limitation upon either the structure of the claimed cigarette or upon the smoking system itself. It follows, absent any compelling evidence to the contrary, that the contested limitation lends no further patentable weight to the instant claims.

With this point in mind and similar to the comments provided in the previous Office Action, the precise metes and bounds of the instant limitation are unclear to the Examiner. As noted in the rejection under 112, first paragraph, Applicants claim amendment appears to require the generation of smoke from a material in the absence of ignition and/or combustion. In view of the ambiguous nature of this phrase and the fact that it provides no substantial limitation upon the structure of cigarette or the electrical smoking system, the particular metes and bounds for which Applicant seeks patent protection are rendered unclear and indefinite.

Applicant is requested to remove said limitation from the identified claims.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 32, 33, 38, 39** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Baggett (US 6,026,820).

Baggett (US 6,026,820) teaches a cigarette structure for an electrically heated smoking system. As evidenced in figure 4A of the instant reference, Baggett teaches an electrically heated cigarette comprising a tobacco rod (80), a free-flow filter (74), a void (91), a tobacco containing mat (66), and an outer wrap (71) **[Claim 39]**. Baggett further discloses an electrical heating system (see figs 2 and 3) for smoking the electrically heated cigarette **[Claims 32, 33, 38]**. The reference teaches that the cigarette may comprise a sorbent section (104) (Column 10, Lines56-65) and in a preferred embodiment, the tobacco mat may comprise a carbon fiber base web **[Claim 2]**.

The reference explicitly teaches that "The tobacco web 66 itself preferably comprises a base web 68 and a layer of tobacco flavor material 70 located along the inside surface of the base web 68...the tobacco web 66 together with the overwrap 71 are wrapped about the tubular free-flow filter plug 74". Finally, Baggett teaches that this flavorant material (70) "liberates a tobacco flavored aerosol (response) when heated" and "such materials may also include continuous sheets, foams, gels dried slurries or dried spray-Deposited slurries of tobacco material" (Column 17, lines 14-19).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-6, 8-15,17-18, 20-22, 26, and 29-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baggett (US 6,026,820) and McCarty (US 3,744,496) in view of Shi (US 2005/0000531 A1).

Baggett teaches incorporating tobacco flavorants (70) upon the tobacco web (66), however the reference is silent regarding the incorporation of other flavorant embodiments as required in the instant claims. The reference to McCarty partially addresses the deficiencies of the Baggett reference, namely McCarty discloses the use of such a tobacco-containing mat as a "excellent method for addition of flavorants to cigarettes".

McCarty specifically teaches a carbon filled inner wrapper for "incorporation into" a tobacco column or for wrapping a tobacco column of a cigarette. Said inner wrapper is typically coated by an outer wrapping of conventional cigarette paper (Column 1, Lines 34-44), and said inner wrapper is constructed from pulped tobacco stalks or stems (Column 2, Lines 20-36). The McCarty wrapper which contains activated carbon (Column2, Lines 51-66) or a "sorbent" is understood to read in claim 1 as a "tobacco-containing mat having a tubular form".

McCarty further clearly sets forth that "this invention also provides an excellent method for the addition of flavorants to a cigarette...The carbon holds the flavorant until it is released by the heat of the burning zone to go into the sidestream of mainstream smoke. Menthol, vanillin, and glycrrhizaz are examples of common flavorings for cigarettes and cigars" (Column 3, Lines 54-62). In the case where the wrapper coated with sorbent and flavorant is used for wrapping a column of tobacco, there will exist regions along the tobacco column wherein flavoring release additive is located upstream of sorbent.

Neither McCarty nor Baggett specifically address Applicants claimed method of incorporating flavorants into the electrically heated cigarette. To this end, Shi teaches a method of adding a flavorant to a smoking article via the microencapsulation of said flavorant within a material having a melting point below the pyrolysis zone temperature of the smoking article. Shi teaches that the disclosed method of microencapsulating flavorants provides distinct advantages with respect to packaging and handeling of the

cigarette products as well as in the condrolled release and delivery of flavorant during smoking. In view of the collective prior art references to McCarty, Baggett, and Shi, it would have been evident to one of ordinary skill in the art at the time of the invention seeking to incorporate the Shi microencaplulated flavorants into a cigarette to coat them onto the tobacco-containing mat as taught by McCarty and Baggett.

The particular teachings set forth in the Shi reference are related as follows;

With respect to **Claim 1**, Shi (pg 1, ¶ [0009]) teaches a smoking article or "cigarette" herein referred to as a composition. This composition incorporates a filter with activated charcoal which is held equivalent to the claimed "at least one sorbent" and a plurality of microcapsules or "a flavor-release additive". The microcapsules include a filler material or "at least one flavoring" and display a melting point temperature or "minimum temperature". Upon heating said microcapsules to the melting point temperature, the flavoring is released.

Regarding **Claim 2** and in light of the Claim 1 rejection above, Shi (Pg 1, ¶ [0009]) indicates that "the filter includes an activated charcoal or an activated carbon" which is understood to read on the immediate claim as a cigarette wherein the sorbent is activated carbon.

With respect to **Claim 3** and in light of the Claim 1 rejection above, the immediate reference (Pg 1, ¶ [0008]) indicates that "a cigarette or other smoking article (may) incorporate an adsorbing material such as...zeolite" which is understood to read on the immediate claim as a cigarette wherein the sorbent is zeolite.

Again with respect to **Claim 4**, Shi indicates (pg1, ¶ [0009]) that "the filler material" or "flavoring" includes menthol.

**Claim 5** is rejected in light of Claim 4 wherein the flavoring menthol is included in the "at least one flavoring" from the identified group of acceptable flavorings in the immediate claim.

**Claim 6** is rejected in light of the Claim 1 rejection above wherein the microcapsules are understood to be of the general form of "beads"

Regarding **Claim 8**, Shi (pg 4, ¶ [0037]) indicates that the microcapsules have a typical size from about 10 nanometer or less to about 1000 micrometers or more which obviates the claimed size range of 25 microns.

Similarly regarding **Claim 9**, Shi (pg 4, ¶ [0037]) indicates that the microcapsules have a typical size from *about 10 nanometers or less* to about 1000 micrometers or more which reads upon the claimed size range less than about 1 micron.

With respect to **Claim 10**, Shi (pg 8, ¶ [0085]) discloses that microcapsules are added to the smokable material to provide a concentration of flavorant from less than about 0.001 wt. % to about 5 wt % flavorant on a tobacco weight basis. Further, the weight percent of filler that is incorporated into a single microcapsule in a typical preparation (pg 5, ¶ [0053]) based on the total mass of the microcapsule ranges from about 20% to about 60%. Shi (pg 4, ¶ [0040]) also indicates that the filling material is typically one or more flavorants, and is incorporated only "*optionally*" in combination with substances other than flavorants. Assuming, as Shi suggests above, that the filling is composed solely of flavoring, it is obvious that the cigarette necessarily comprises a

weight percent of microspheres in the range of 0.001667% to 25% [eg. (0.05g flavorant/1.0 g tobacco)*(1gm microcapsule/0.2gm flavorant)=25%wt microcapsule]. Since the claimed weight percent concentration of beads of up to about 20% by weight based on the total weight of tobacco clearly falls within the above weight percent range of between 0.001667% and 25% by weight the immediate claim is obvious over the prior art.

Regarding **Claim 11** and in accord with the above argument for the Claim 10 rejection, it was clearly set forth that the weight percent of filler that is incorporated into a single microcapsule in a typical preparation (pg 5, ¶ [0053]) based on the total mass of the microcapsule ranges from about 20% to about 60%. Further since the filling can be composed solely of flavoring (pg 4, ¶ [0040]) *or may include substances other than flavorants*, it is obvious that the beads or "microcapsules" described by Shi may comprise up to about 20% of the flavoring.

With respect to **Claim 12**, Shi indicates (pg 7, ¶ [0083]) that in a preferred embodiment, the microcapsules are deposited onto the smokable material, and that the combustion zone of tobacco are typically from about 600°C to about 900°C (pg 4, ¶ [0041]). Since the encapsulant or shell material display a melting point or "minimum temperature" from about 35°C or lower to about 200°C or higher (pg 4, ¶ [0042]), the minimum temperature is understood to be about 40°C. Further since the microcapsules are on the smokable material in the combustion zone during smoking, the beads are located in a region of the cigarette that reaches at least about 40°C during smoking of the cigarette.

As outlined in the Claim 12 rejection above, the microspheres or beads may be deposited on the tobacco (pg 7, ¶ [0083]) and it is a well established and common practice to incorporate tobacco into a tobacco plug or rod in the conventional design of a cigarette, **Claim 13** is deemed obvious over the prior art.

With respect to **Claim 14**, Shi (pg 7, ¶ [0083]) indicated that the microcapsules are "deposited onto the smokable material", and more specifically that the "*microcapsules may be applied as a suspension* in a suitable liquid" (pg. 8, ¶ [0084]). As a point of reference, the applicant indicates in body of the specification that "the film can be applied to one or more components of the electrically heated cigarette as ***a liquid coating, which is dried to a film***". Further, the applicant asserts (pg17, ¶ [0068]) that in a preferred embodiment, "***an emulsion, suspension, or slurry comprising the binder, flavoring, and optional additives is prepared and then applied as a coating*** to one or more selected surfaces of one or more selected components of the electrically heated cigarette." Since the microcapsules described by Shi comprise a binder and a flavoring, a suspension deposited onto the smokable material comprising said microcapsules in "a suitable liquid" is held equivalent to the process as related by the applicant through the following steps:

1) preparing an emulsion, suspension, or slurry comprising the binder, flavoring, and optional additives
2) applying said emulsion, suspension, or slurry as a liquid coating to a component of the cigarette
3) drying said coating form a film.

Regarding **Claim 15** and in light of the Claim 14 rejection above, Shi discloses (pg5, ¶ [0049]) that the shell material or "binder" in the microcapsule include gum arabic

which is read in the immediate context wherein the film comprises a binder from the group including gum arabic among other compounds.

**Claim 17** is rendered obvious in light of the Claim 14 rejection above wherein the film is essentially composed of the microspheres and the argument set forth in Claim 10 rejection which indicated that the beads constitute up to 25% weight based on the total weight of the tobacco. In the present context, the film and the beads are compositionally held equivalent, and therefore the terms "the film" and "the beads" are interchangeable. Since the film consists of the beads and the beads constitute up to 25% wt. of the cigarette, the film constitutes up to 25% wt. of the cigarette and therefore "the cigarette comprises up to about 20% by weight of the film" as claimed.

Regarding **Claim 18** and in light of the above arguments presented in Claims 14 and 17 and the rejection set forth for Claim 11 above. Specifically, the beads or "microcapsules" comprise up to about 20% of the flavoring and the beads essentially comprise the film. Therefore, the film comprises by weight up to about 20% of the flavoring.

**Claim 20** is obvious in light of the rejections of Claim 14 and Claim 12 as set forth above. Specifically, Claim 14 indicated that the microcapsules are "deposited onto the smokable material" which is read in the immediate claim as creating a film of the flavoring-release additive. As outlined in Claim 12, the film is comprised of microcapsules and the film is deposited on the smokable material. Since said smokable material is in the combustion zone during smoking, the film is likewise located in a region of the cigarette that reaches at least about 50°C during smoking of the cigarette.

Regarding **Claim 21** and in light of the Claim 14 rejection above the fact that it is a well established and common practice to incorporate tobacco into a tobacco plug or rod in the conventional design of a cigarette

Regarding **Claim 22**, Shi (pg 6, ¶ [0058]) indicates that the microcapsule may be formed by a complex coacervate or cluster of molecules wherein a pair of oppositely charged molecules or polymer particles are bound together by electrostatic attraction. This synthetic approach described by Shi is held equivalent to the claimed "inclusion complex wherein the host molecule and flavoring are collectively considered the pair of oppositely charged molecules. As a specific example presented by Shi, a flavorant or filler dispersed in gelatin is encapsulated by a coacervate between gum Arabic with the gelatin. Therefore in the context of the present claim the flavorant and gelatin are considered the guest molecules in the host shell of gum Arabic.

**Claim 26** is rejected in light of the rejections of Claim 22 and Claim 20 above. Specifically Claim 22 sets forth a case wherein the flavor-release additive is an "inclusion complex" and by the Claim 20 rejection wherein a film of said inclusion complex on cut tobacco will reach at least 60°C during the smoking of the cigarette.

Continuing with **Claim 29**, Shi (pg 14, ¶ [0150]) indicates that the filter material may have the form of a non-woven web of fibers or a tow". Although the reference is silent regarding the length scale for said fibers as between 0.01 and .2mm, absent unexpected results to the contrary it would have been obvious to one of ordinary skill in the art at the time of the invention to implement fibers in the claimed length range.

**Claim 30** is obviated by Shi (pg 14, ¶ [0149]) wherein it is disclosed that "the adsorptive or absorptive component... is generally ***dispersed within the porous filter material*** of the filter segment". In the immediate context, the term "dispersed within" is held equivalent to "impregnated with" as claimed. In light of the Claim 28 and 29 rejections, this disclosure reads on the present claim wherein the fibers are impregnated with at least one sorbent.

**Claim 31** is obvious over Prior Art by Shi (pg 1, ¶ [0009]) wherein in order to construct the described smoking article as a single, unitary body from an inidvidual filter and an individual tobacco rod, it would be obvious to attach said rod to said filter.

With respect to **Claim 32**, Shi indicates (pg 13, ¶ [0140,0141]) that "smoke produced from the smokable material passes into the filter before entering the smoker and the filter "removes at least one undesired component from tobacco smoke". It is a well established process in the practice of utilizing a cigarette that said cigarette be heated in order to form the smoke. Further as described by Shi, this smoke is drawn through the cigarette with a cocurrent advance of the heated region down the tobacco column. As indicated above, the flavoring-release additive heated adequately within such an advancing heated region releases its flavoring into the mainstream smoke.

**Claim 34** is obvious in light of the Claim 1 rejection under 35 USC 103(a)above and the rejection of Claim 6 wherein the microcapsules or flavor-release additive was equated to the as claimed "beads".

**Claim 35** is obvious in light of the Claim 34 rejection above and the disclosure by Shi (pg 5, ¶ [0045]) which states that microcapsules with varied melt temperatures can

be included in a single cigarette to ensure a constant release of menthol". This disclosure reads on the immediate claim as a case wherein at least two flavoring-release additives are incorporated with different minimum temperatures at which the flavoring is released during smoking.

**Claim 36** is obvious in light of the argument set forth in the Claim 34 rejection above and the rejection of Claim 31.

**Claim 37** is obvious in light of the argument set forth in the Claim 34 rejection above an the rejection of Claim 32.

**Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Baggett (US 6,026,820) and McCarty (US 3,744,496), and Shi (US 2005/0000531 A1) as applied to the Claim 6 rejection above and in light of Wakamiya (6,056,974).

Shi, Baggett, and McCarty render obvious all of the elements of the parent claim 6 and Shi indicates (pg 1, ¶ [0016]) that the shell material or "binder" used in the microcapsules is chosen from among a group of compounds which include "water soluble cellulose".

Shi does not indicated that the indicated water soluble cellulose should be of a specific type (e.g. hydroxypropylcellulose or hydroxyporpylmethylcellulose).

Wakamiya (column4, Lines59-62), however indicates that "the cellulose coating agents (which) have high water-solubility,... include, for example, hydroxypropylcellulose and hydroxypropylmethylcellulose (HPMC)."

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention when selecting a water soluble cellulose for a binder as taught by Shi to utilize hydroxypropylcellulose or HPMC as taught by Wakamiya due to their high water solubility and relative ease of coating.

**Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Baggett (US 6,026,820) and McCarty (US 3,744,496), and Shi (US 2005/0000531 A1) as applied in the rejection of Claim 14 above and Applicants disclosure in the body of the specification (pg.17, ¶ 0067]) that "the dimensions of the dried film are not limited".

Specifically, in the absence of any unexpected results outside of the claimed film thickness range, it would be obvious to one of ordinary skill in the art to empirically vary said film thickness to optimize flavorant delivery to the mainstream smoke while minimizing adverse impact of the film material on the burn rate of the tobacco shred.

**Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Baggett (US 6,026,820) and McCarty (US 3,744,496), and Shi (US 2005/0000531 A1) as applied in the rejection of Claim 14 above and further in view of Bradley (4,195,645).

As described above, Baggett, Shi and McCarty render obvious all of the elements of Claim 14 wherein the microcapsules are applied to the tobacco shred or other component within the cigarette as a film cast from an solution based emulsion or slurry. Shi fails to indicate a case wherein "the film is preformed, shredded and incorporated in the tobacco plug or other selected locations" as set forth in the specification or wherein "the film is in shredded form" as disclosed in the immediate claim.

Bradley presents (Column 2, Lines 2-5) a smoking material consisting of microencapsulated flavorants which provide a tobacco-substitute product having a flavor nearly approximating that of tobacco. Bradley continues (Column 8, Lines 6-15) by indicating that "from the standpoint of ...that the (microcapsule) compositions be in shredded film form." Further, the immediate reference (Column 8, Lines 21-37) sets out a scenario where films of the microcapsules are cast from solution dried to a thin sheet and cut or shredded prior to use.

Given the disclosure by Bradley, it would be obvious to one of ordinary skill in the art when incorporating microencapsulated flavorants into a cigarette by the Shi process to incorporate them in shredded film form in order to facilitate the processing as indicated by Bradley.

**Claims 23 through 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baggett (US 6,026,820) and McCarty (US 3,744,496), and Shi (US 2005/0000531 A1) in view of Demain (5,144,946).

Specifically with respect to **Claim 23** and as outlined above in the rejection of Claim 22 under 35 USC 103(a), Baggett/Shi/McCarty teaches all of the elements of Claim 1 wherein the flavor release additive is an inclusion complex comprising a pair of oppositely charged molecules or polymer particles are bound together by electrostatic attraction.

Shi fails to teach that one molecule of said pair of oppositely charged molecules, presently referred to as the "host" molecule, should be beta-cyclodextrin.

Demain (Column 2, Lines 22-30) teaches the use of water soluble beta-cyclodextrin as component of a flavorant-release additive for use in flavoring smoke produced by a smoking article. Demain further indicates that this flavorant release additive is characterized by a lack of mobility and/or volatility at ambient temperatures (Column 2, Lines 1-5). It would therefore have been obvious to one of ordinary skill in the art at the time of the invention when selecting a flavor release additive for a tobacco product to choose beta-cyclodextrin as a component in a flavor-release additive due to its low ambient volatility. Specifically, a flavorant expressing low ambient volatility would be desirable in order to increase the shelf life of said tobacco product.

Regarding **Claim 24** and in light of the Claim 23 rejection above, Demain (Column2, Lines 45-48) indicates that "a cigarette smoking product with treated paper wrapper...contains between 0.01-5 weight percent of flavorant-release additive in the

paper wrapper." This disclosure by Demain obviously reads on the immediate claim wherein an "over wrap" or treated paper wrapper comprises less than about 15% by weight of the inclusion complex.

**Claim 25** is rendered obvious in light of the sample preparation as set forth by Demain in Example I (Column 4, Lines 47-56) and the rejection of Claim 23 as set forth above. Specifically it is indicated that 100mg (0.1g) of the flavorant Vanillin is mixed with 2 ml of a 45% weight/weight aqueous solution of beta-cyclodextrin. It is obvious that the inclusion complex comprises less than about 20% of the flavoring based on the total mass of the inclusion complex.

**Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Baggett (US 6,026,820) and McCarty (US 3,744,496), and Shi (US 2005/0000531 A1) as applied to the Claim 22 rejection above and the disclosure (pg 16, ¶ [0171]) that components may also be added to the smokable material, or may be contained within the filter, the tobacco rod, or other components of the smoking articles" and that "Flavorants can be incorporated into the cigarette conventional techniques... *in addition to the microencapsulation technique described herein*" (pg 16, ¶ [0173])."

The instant disclosure is read as incorporating the said microcapsules or flavor-release additives and flavorant in alternate locations within the cigarette in addition to or instead of the tobacco rod. In the present context, it is obvious that Shi intends to include other components of the cigarette (e.g. an inner wrap, a tobacco-containing mat,

and/or an overwrap surrounding said mat) as a substrate for the microspheres as in commonly practiced when adding flavoring to mainstream smoke.

### *Response to Arguments*

Applicant's arguments with respect to claims 1-27 and 29-39 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571)

272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL

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